```
Connecting via Winsock to STN



Welcome to STN International!  Enter x:x

LOGINID:SSSPTA1600RXA

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2


* * * * * * * * * *   Welcome to STN International   * * * * * * * * * *

 NEWS  1          Web Page for STN Seminar Schedule - N. America
 NEWS  2  AUG 10  Time limit for inactive STN sessions doubles to 40
                  minutes
 NEWS  3  AUG 18  COMPENDEX indexing changed for the Corporate Source
                  (CS) field
 NEWS  4  AUG 24  ENCOMPLIT/ENCOMPLIT2 reloaded and enhanced
 NEWS  5  AUG 24  CA/CAplus enhanced with legal status information for
                  U.S. patents
 NEWS  6  SEP 09  50 Millionth Unique Chemical Substance Recorded in
                  CAS REGISTRY
 NEWS  7  SEP 11  WPIDS, WPINDEX, and WPIX now include Japanese FTERM
                  thesaurus
 NEWS  8  OCT 21  Derwent World Patents Index Coverage of Indian and
                  Taiwanese Content Expanded
 NEWS  9  OCT 21  Derwent World Patents Index enhanced with human
                  translated claims for Chinese Applications and
                  Utility Models
 NEWS 10  OCT 27  Free display of legal status information in CA/CAplus,
                  USPATFULL, and USPAT2 in the month of November.

 NEWS EXPRESS MAY 26 09 CURRENT WINDOWS VERSION IS V8.4,
              AND CURRENT DISCOVER FILE IS DATED 06 APRIL 2009.

 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
 NEWS LOGIN    Welcome Banner and News Items

Enter NEWS followed by the item number or name to see news on that
specific topic.

  All use of STN is subject to the provisions of the STN customer
  agreement.  This agreement limits use to scientific research.  Use
  for software development or design, implementation of commercial
  gateways, or use of CAS and STN data in the building of commercial
  products is prohibited and may result in loss of user privileges
  and other penalties.

* * * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 09:44:09 ON 03 NOV 2009

=> fil reg
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.66       0.66

FILE 'REGISTRY' ENTERED AT 09:46:08 ON 03 NOV 2009
```

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 1 NOV 2009 HIGHEST RN 1190833-66-9
DICTIONARY FILE UPDATES: 1 NOV 2009 HIGHEST RN 1190833-66-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

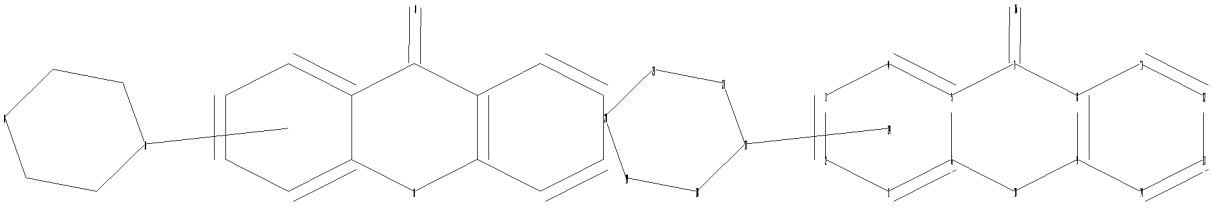
TSCA INFORMATION NOW CURRENT THROUGH June 26, 2009.

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=>
Uploading C:\Program Files\Stnexp\Queries\QUERIES\10550978.str

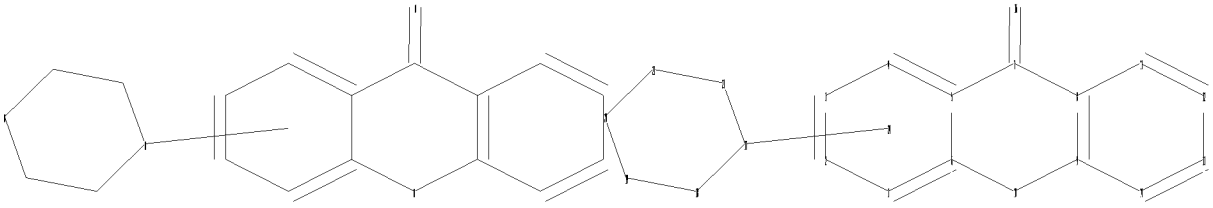


chain nodes :
16
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 17 18 19 20 21 23
chain bonds :
7-16
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 8-9 8-11 9-10 9-14 11-12 12-13
13-14 17-23 17-18 18-19 19-20 20-21 21-23
exact/norm bonds :
5-7 6-10 7-8 7-16 9-10 17-23 17-18 18-19 19-20 20-21 21-23
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6 8-9 8-11 9-14 11-12 12-13 13-14

Match level :
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 16:CLASS 17:CLASS 18:CLASS
19:CLASS 20:CLASS 21:CLASS 23:CLASS 24:CLASS

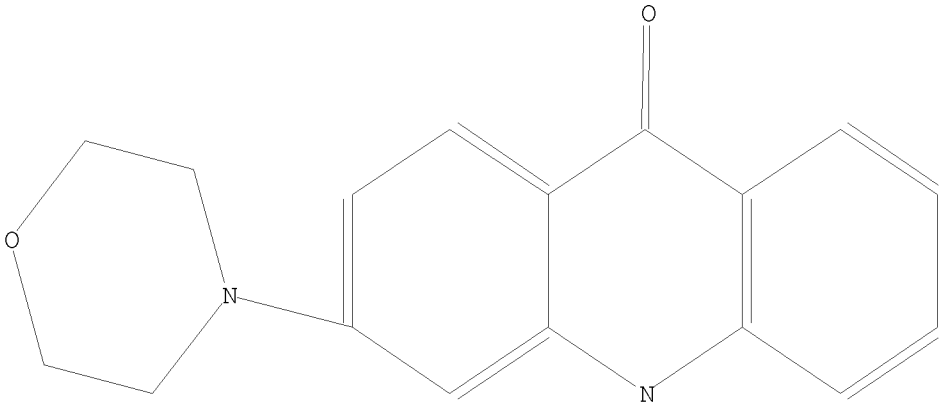
L1 STRUCTURE UPLOADED

```
=> d
L1 HAS NO ANSWERS
L1              STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.


=> s l1
SAMPLE SEARCH INITIATED 09:46:36 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -    62081 TO ITERATE

  3.2% PROCESSED     2000 ITERATIONS                                3 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:      1226753 TO  1256487
PROJECTED ANSWERS:            1284 TO     2440

L2            3 SEA SSS SAM L1

=> s l1 full
FULL SEARCH INITIATED 09:46:40 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -  1242745 TO ITERATE

 86.9% PROCESSED  1079893 ITERATIONS                            2481 ANSWERS

 99.0% PROCESSED  1229910 ITERATIONS                            2481 ANSWERS

100.0% PROCESSED  1242745 ITERATIONS                            2481 ANSWERS
SEARCH TIME: 00.00.37

L3         2481 SEA SSS FUL L1

=>
Uploading C:\Program Files\Stnexp\Queries\QUERIES\10550978.str
```



```
chain nodes :
16
ring nodes :
1  2  3  4  5  6  7  8  9  10  11  12  13  14  17  18  19  20  21  23
chain bonds :
7-16
ring bonds :
1-2  1-6  2-3  3-4  4-5  5-6  5-7  6-10  7-8  8-9  8-11  9-10  9-14  11-12  12-13
13-14  17-23  17-18  18-19  19-20  20-21  21-23
exact/norm bonds :
```

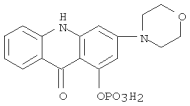
```
5-7  6-10  7-8  7-16  9-10  17-23  17-18  18-19  19-20  20-21  21-23
normalized bonds :
1-2  1-6  2-3  3-4  4-5  5-6  8-9  8-11  9-14  11-12  12-13  13-14


Match level :
1:CLASS  2:CLASS  3:CLASS  4:CLASS  5:CLASS  6:CLASS  7:CLASS  8:CLASS  9:CLASS
10:CLASS  11:CLASS  12:CLASS  13:CLASS  14:CLASS  16:CLASS  17:CLASS  18:CLASS
19:CLASS  20:CLASS  21:CLASS  23:CLASS  24:CLASS



L4      STRUCTURE UPLOADED

=> d
L4 HAS NO ANSWERS
L4              STR
```




```
Structure attributes must be viewed using STN Express query preparation.


=> s l4
SAMPLE SEARCH INITIATED 09:51:31 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -      146 TO ITERATE

100.0% PROCESSED      146 ITERATIONS                                  0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:         2196 TO     3644
PROJECTED ANSWERS:               0 TO        0

L5            0 SEA SSS SAM L4

=> s l4 full
FULL SEARCH INITIATED 09:51:35 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -     2407 TO ITERATE

100.0% PROCESSED     2407 ITERATIONS                                 13 ANSWERS
SEARCH TIME: 00.00.01

L6           13 SEA SSS FUL L4

=> s l6 and caplus/lc
```

```
      68915430 CAPLUS/LC
L7          12 L6 AND CAPLUS/LC

=> s l6 not l7
L8           1 L6 NOT L7

=> d
```

L8 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2009 ACS on STN
RN 794488-48-5 REGISTRY
ED Entered STN: 08 Dec 2004
CN 9(10H)-Acridinone, 3-(4-morpholinyl)-1-(phosphonooxy)- (CA INDEX NAME)
MF C17 H17 N2 O6 P
CI COM
SR CA



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

```
=> fil caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                   383.00     383.66

FILE 'CAPLUS' ENTERED AT 09:51:52 ON 03 NOV 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)


Copyright of the articles to which records in this database refer is
held by the publishers listed in the PUBLISHER (PB) field (available
for records published or updated in Chemical Abstracts after December
26, 1996), unless otherwise indicated in the original publications.
The CA Lexicon is the copyrighted intellectual property of the
American Chemical Society and is provided to assist you in searching
databases on STN.  Any dissemination, distribution, copying, or storing
of this information, without the prior written consent of CAS, is
strictly prohibited.

FILE COVERS 1907 - 3 Nov 2009  VOL 151 ISS 19
FILE LAST UPDATED: 2 Nov 2009  (20091102/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED:  Aug 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE:  Aug 2009

CAplus now includes complete International Patent Classification (IPC)
reclassification data for the third quarter of 2009.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate
substance identification.

During November, try the new LSUS format of legal status information
in the CA/CAplus family databases for free!  Complete details on the
number of free displays and other databases participating in this
offer appear in NEWS 10.

=> d his

     (FILE 'HOME' ENTERED AT 09:44:09 ON 03 NOV 2009)

     FILE 'REGISTRY' ENTERED AT 09:46:08 ON 03 NOV 2009
L1             STRUCTURE UPLOADED
L2               3 S L1
L3            2481 S L1 FULL
L4             STRUCTURE UPLOADED
L5               0 S L4
L6              13 S L4 FULL
L7              12 S L6 AND CAPLUS/LC
L8               1 S L6 NOT L7

     FILE 'CAPLUS' ENTERED AT 09:51:52 ON 03 NOV 2009
```

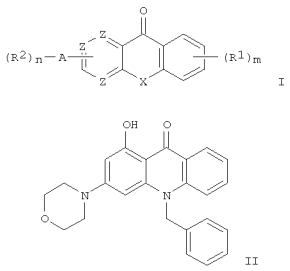
```
=> s l7
L9            2 L7

=> d ibib abs hitstr 1-2
```

L9 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:817876 CAPLUS
DOCUMENT NUMBER: 141:314155
TITLE: Preparation of xanthenone and acridinone DNA-PK inhibitors as cancer treatment potentiators
INVENTOR(S): Halbrook, James W.; Kesicki, Edward A.; Burgess, Laurence Edward; Schlachter, Stephen T.; Eary, Charles T.; Schiro, Justin G.
PATENT ASSIGNEE(S): Icos Corporation, USA
SOURCE: PCT Int. Appl., 149 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004085418	A2	20041007	WO 2004-US8459	20040319
WO 2004085418	A3	20050127		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004223866	A1	20041007	AU 2004-223866	20040319
CA 2523178	A1	20041007	CA 2004-2523178	20040319
EP 1660473	A2	20060531	EP 2004-757891	20040319
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
JP 2006523681	T	20061019	JP 2006-507373	20040319
US 20070167441	A1	20070719	US 2006-550978	20061211
PRIORITY APPLN. INFO.:			US 2003-456999P P	20030324
			WO 2004-US8459 W	20040319

OTHER SOURCE(S): MARPAT 141:314155
GI



I

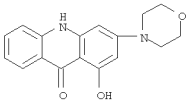
II

AB Title compds. I [wherein m = 0-3; n = 0-4; X = O, SO0-2, NRa; Z = independently CRb, N; A = heteroaryl; R1 = independently halo (un)substituted (cyclo)alkyl, heterocyclylalkyl, amino carboxy, phosphoryl, acyl, (hetero)aryl, etc.; R2 = independently halo, CHO, (un)substituted alkyl, (hetero)aryl, carbamoyl, carboxy, etc.; R1 = H, (cyclo)alkyl, (hetero)aryl, carboxy, carbamoyl, etc.; Rb = independently H, alkyl, halo, CHO, alkoxy, phosphoryl, amino, carboxy, etc.; and pharmaceutically acceptable salts and prodrugs thereof] were prepared as DNA-dependent protein kinase (DNA-PK) inhibitors. I and their pharmaceutical compns. potentiate cancer treatment by sensitizing cells to an agent that induces DNA lesions. For example, condensation of 1,3-dihydroxy-10H-acridin-9-one with trifluoromethanesulfonic anhydride gave the triflate. Pd-catalyzed substitution of the monoester with morpholine, followed by benzylation provided II. The latter inhibited DNA-PK induced phosphorylation of a p53 peptide substrate with a IC50 of 20 nM.

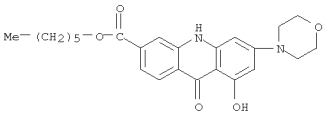
IT 767357-69-7P, 1-Hydroxy-3-(morpholin-4-yl)-10H-acridin-9-one 767357-86-8P, 8-Hydroxy-6-(morpholin-4-yl)-9-oxo-9,10-dihydroacridine-3-carboxylic acid hexyl ester
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(DNA-PK inhibitor; preparation of xanthenone and acridinone DNA-PK inhibitors as cancer treatment potentiators)

RN 767357-69-7 CAPLUS
CN 9(10H)-Acridinone, 1-hydroxy-3-(4-morpholinyl)- (CA INDEX NAME)

L9 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)

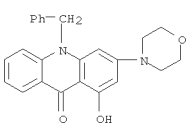


RN 767357-86-8 CAPLUS
CN 3-Acridinecarboxylic acid, 9,10-dihydro-8-hydroxy-6-(4-morpholinyl)-9-oxo-, hexyl ester (CA INDEX NAME)



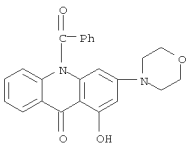
IT 767357-42-6P, 10-Benzyl-1-hydroxy-3-(morpholin-4-yl)-10H-acridin-9-one 767357-70-0P, 10-Benzoyl-1-hydroxy-3-(morpholin-4-yl)-10H-acridin-9-one 767357-71-1P, 1-Hydroxy-10-isobutyryl-3-(morpholin-4-yl)-10H-acridin-9-one 767357-72-2P, 1-Hydroxy-3-(morpholin-4-yl)-10-[(pyridin-4-yl)carbonyl]-10H-acridin-9-one 767357-73-3P, 1-Hydroxy-3-(morpholin-4-yl)-10-[(pyridin-3-yl)carbonyl]-10H-acridin-9-one 767357-87-9P, 8-Hydroxy-6-(morpholin-4-yl)-9-oxo-9,10-dihydroacridine-3-carboxylic acid 2-dimethylaminoethyl ester
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(DNA-PK inhibitor; preparation of xanthenone and acridinone DNA-PK inhibitors as cancer treatment potentiators)

RN 767357-42-6 CAPLUS
CN 9(10H)-Acridinone, 1-hydroxy-3-(4-morpholinyl)-10-(phenylmethyl)- (CA INDEX NAME)

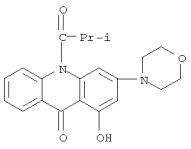


RN 767357-70-0 CAPLUS
CN 9(10H)-Acridinone, 10-benzoyl-1-hydroxy-3-(4-morpholinyl)- (CA INDEX NAME)

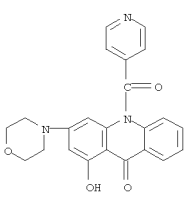
L9 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



RN 767357-71-1 CAPLUS
CN 9(10H)-Acridinone, 1-hydroxy-10-(2-methyl-1-oxopropyl)-3-(4-morpholinyl)- (CA INDEX NAME)

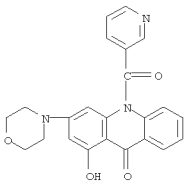


RN 767357-72-2 CAPLUS
CN 9(10H)-Acridinone, 1-hydroxy-3-(4-morpholinyl)-10-(4-pyridinylcarbonyl)- (CA INDEX NAME)

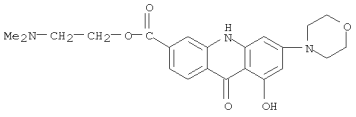


RN 767357-73-3 CAPLUS
CN 9(10H)-Acridinone, 1-hydroxy-3-(4-morpholinyl)-10-(3-pyridinylcarbonyl)- (CA INDEX NAME)

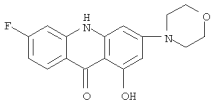
L9 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



RN 767357-87-9 CAPLUS
CN 3-Acridinecarboxylic acid, 9,10-dihydro-8-hydroxy-6-(4-morpholinyl)-9-oxo-, 2-(dimethylamino)ethyl ester (CA INDEX NAME)

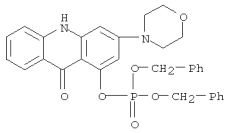


IT 767357-89-1, 6-Fluoro-1-hydroxy-3-(morpholin-4-yl)-10H-acridin-9-one
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of xanthenone and acridinone DNA-PK inhibitors as cancer treatment potentiators)
RN 767357-89-1 CAPLUS
CN 9(10H)-Acridinone, 6-fluoro-1-hydroxy-3-(4-morpholinyl)- (CA INDEX NAME)

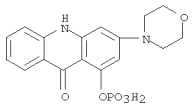


IT 767357-77-7P, Phosphoric acid dibenzyl ester 3-(morpholin-4-yl)-9-oxo-9,10-dihydroacridin-1-yl ester
767357-81-3P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prodrug, DNA-PK inhibitor; preparation of xanthenone and acridinone DNA-PK
inhibitors as cancer treatment potentiators)

L9 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)
RN 767357-77-7 CAPLUS
CN Phosphoric acid, 9,10-dihydro-3-(4-morpholinyl)-9-oxo-1-acridinyl bis(phenylmethyl) ester (CA INDEX NAME)



RN 767357-81-3 CAPLUS
CN 9(10H)-Acridinone, 3-(4-morpholinyl)-1-(phosphonooxy)-, sodium salt (1:2)
(CA INDEX NAME)



●2 Na

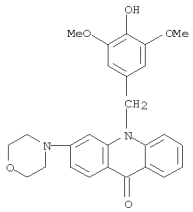
REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1992:235461 CAPLUS
DOCUMENT NUMBER: 116:235461
ORIGINAL REFERENCE NO.: 116:39880h,39881a
TITLE: Preparation of 9,10-dihydroacridine-9-one derivatives
INVENTOR(S): Butlin, Roger John; Glarvey, Dickson
PATENT ASSIGNEE(S): Imperial Chemical Industries PLC, UK
SOURCE: Eur. Pat. Appl., 33 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 471516	A1	19920219	EP 1991-307341	19910809
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
HU 58293	A2	19920228	HU 1991-2511	19910726
AU 9181422	A	19920220	AU 1991-81422	19910729
ZA 9105937	A	19920429	ZA 1991-5937	19910729
CA 2048298	A1	19920217	CA 1991-2048298	19910801
NO 9103187	A	19920217	NO 1991-3187	19910815
JP 04257563	A	19920911	JP 1991-205027	19910815
FI 9103893	A	19920217	FI 1991-3893	19910816
PRIORITY APPLN. INFO.:			GB 1990-18044 A	19900816

OTHER SOURCE(S): MARPAT 116:235461
GI For diagram(s), see printed CA Issue.
AB Title compds. I (A together with the adjacent vinylene completes a (substituted) benzene or pyridine ring; R1, R2 = C1-4 alkyl, C1-4 alkoxy; R3 = H, C1-4 alkyl, C1-4 alkoxy) or a salt, or in vivo hydrolyzable ester useful as anticancer drugs (no data), are prepared NaH was added to 9-acridinone, followed by 3,5,4-(MeO)2(Me3CSiMe2O)C6H2CH2Cl (preparation given)
to give the appropriate silylacridinone derivative which was treated with Bu4N+ F- to give after workup I (A completes a benzene ring, R1 = R2 = Me,
R3 = H).
IT 141328-36-1P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological
study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of, as anticancer agent)
RN 141328-36-1 CAPLUS
CN 9(10H)-Acridinone, 10-[(4-hydroxy-3,5-dimethoxyphenyl)methyl]-3-(4-morpholinyl)- (CA INDEX NAME)

L9 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD
(4 CITINGS)

=> fil reg
COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION
FULL ESTIMATED COST | 14.28 | 397.94

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION
CA SUBSCRIBER PRICE | -1.64 | -1.64

FILE 'REGISTRY' ENTERED AT 09:55:16 ON 03 NOV 2009

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 1 NOV 2009 HIGHEST RN 1190833-66-9
DICTIONARY FILE UPDATES: 1 NOV 2009 HIGHEST RN 1190833-66-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 26, 2009.

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

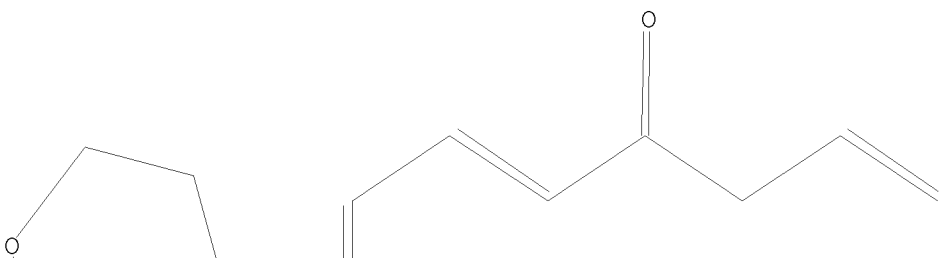
REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of

exact/norm bonds :
5-7 6-10 7-8 7-16 9-10 17-23 17-18 18-19 19-20 20-21 21-23
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6 8-9 8-11 9-14 11-12 12-13 13-14

Match level :
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 16:CLASS 17:CLASS 18:CLASS
19:CLASS 20:CLASS 21:CLASS 23:CLASS 24:CLASS

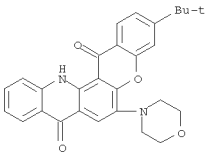
L10   STRUCTURE UPLOADED

=> d
L10 HAS NO ANSWERS
L10   STR



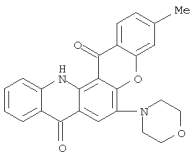
```
FULL SCREEN SEARCH COMPLETED -    40789 TO ITERATE

100.0% PROCESSED    40789 ITERATIONS                              15 ANSWERS
SEARCH TIME: 00.00.01

L12          15 SEA SSS FUL L10

=> d his

     (FILE 'HOME' ENTERED AT 09:44:09 ON 03 NOV 2009)

     FILE 'REGISTRY' ENTERED AT 09:46:08 ON 03 NOV 2009
L1               STRUCTURE UPLOADED
L2             3 S L1
L3          2481 S L1 FULL
L4               STRUCTURE UPLOADED
L5             0 S L4
L6            13 S L4 FULL
L7            12 S L6 AND CAPLUS/LC
L8             1 S L6 NOT L7

     FILE 'CAPLUS' ENTERED AT 09:51:52 ON 03 NOV 2009
L9             2 S L7

     FILE 'REGISTRY' ENTERED AT 09:55:16 ON 03 NOV 2009
L10              STRUCTURE UPLOADED
L11            0 S L10
L12           15 S L10 FULL
```

L13 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2009 ACS on STN
RN 383410-09-1 REGISTRY
ED Entered STN: 16 Jan 2002
CN 8H-[1]Benzopyrano[2,3-c]acridine-8,14(13H)-dione,
3-(1,1-dimethylethyl)-6-(4-morpholinyl)- (CA INDEX NAME)
MF C28 H26 N2 O4
SR Chemical Library
Supplier: Ambinter



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

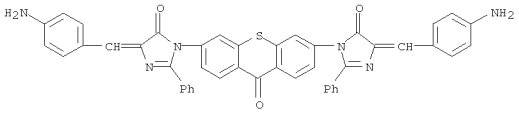
L13 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2009 ACS on STN
RN 382642-26-4 REGISTRY
ED Entered STN: 14 Jan 2002
CN 8H-[1]Benzopyrano[2,3-c]acridine-8,14(13H)-dione,
3-methyl-6-(4-morpholinyl)- (CA INDEX NAME)
MF C25 H20 N2 O4
SR Chemical Library
Supplier: Ambinter



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

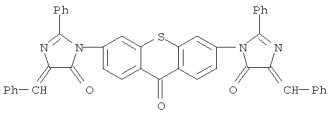
```
=> d his

     (FILE 'HOME' ENTERED AT 09:44:09 ON 03 NOV 2009)

     FILE 'REGISTRY' ENTERED AT 09:46:08 ON 03 NOV 2009
L1                STRUCTURE UPLOADED
L2             3 S L1
L3          2481 S L1 FULL
L4                STRUCTURE UPLOADED
L5             0 S L4
L6            13 S L4 FULL
L7            12 S L6 AND CAPLUS/LC
L8             1 S L6 NOT L7

     FILE 'CAPLUS' ENTERED AT 09:51:52 ON 03 NOV 2009
L9             2 S L7

     FILE 'REGISTRY' ENTERED AT 09:55:16 ON 03 NOV 2009
L10               STRUCTURE UPLOADED
L11            0 S L10
L12           15 S L10 FULL
L13            2 S L12 NOT L6

=> s l3 and caplus/lc
      68915430 CAPLUS/LC
L14       1391 L3 AND CAPLUS/LC

=> s l3 not l14
L15       1090 L3 NOT L14

=> d l15 1080-1090
```

L15 ANSWER 1080 OF 1090 REGISTRY COPYRIGHT 2009 ACS on STN
RN 359914-14-0 REGISTRY
ED Entered STN: 03 Oct 2001
CN 4H-Imidazol-4-one, 3,3'-(9-oxo-9H-thioxanthene-3,6-diyl)bis[5-[(4-aminophenyl)methylene]-3,5-dihydro-2-phenyl- (CA INDEX NAME)
MF C45 H30 N6 O3 S
SR Chemical Library



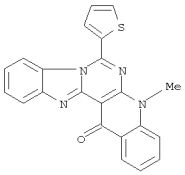
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L15 ANSWER 1081 OF 1090 REGISTRY COPYRIGHT 2009 ACS on STN
RN 359914-13-9 REGISTRY
ED Entered STN: 03 Oct 2001
CN 4H-Imidazol-4-one, 3,3'-(9-oxo-9H-thioxanthene-3,6-diyl)bis[3,5-dihydro-2-phenyl-5-(phenylmethylene)- (CA INDEX NAME)
MF C45 H28 N4 O3 S
SR Chemical Library



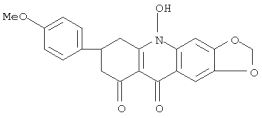
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L15 ANSWER 1082 OF 1090 REGISTRY COPYRIGHT 2009 ACS on STN
RN 327080-47-7 REGISTRY
ED Entered STN: 14 Mar 2001
CN Benzimidazo[1',2':1,6]pyrimido[4,5-b]quinolin-14(5H)-one, 5-methyl-7-(2-thienyl)- (CA INDEX NAME)
MF C22 H14 N4 O S
SR Chemical Library
Supplier: Ambinter
LC STN Files: CHEMCATS



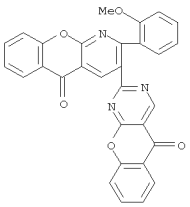
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L15 ANSWER 1083 OF 1090 REGISTRY COPYRIGHT 2009 ACS on STN
RN 296246-51-0 REGISTRY
ED Entered STN: 17 Oct 2000
CN 1,3-Dioxolo[4,5-b]acridine-9,10(5H,6H)-dione, 7,8-dihydro-5-hydroxy-7-(4-methoxyphenyl)- (CA INDEX NAME)
MF C21 H17 N O6
SR Chemical Library
Supplier: Zelinsky Institute of Organic Chemistry
LC STN Files: CHEMCATS



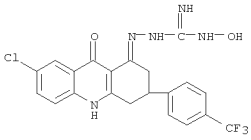
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L15 ANSWER 1084 OF 1090 REGISTRY COPYRIGHT 2009 ACS on STN
RN 112583-94-5 REGISTRY
ED Entered STN: 30 Jan 1988
CN 5H-[1]Benzopyrano[2,3-d]pyrimidin-5-one, 2-[2-(2-methoxyphenyl)-5-oxo-5H-[1]benzopyrano[2,3-b]pyridin-3-yl]- (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5H-[1]Benzopyrano[2,3-b]pyridine, 5H-[1]benzopyrano[2,3-d]pyrimidin-5-one deriv.
MF C30 H17 N3 O5
CI COM
SR CA



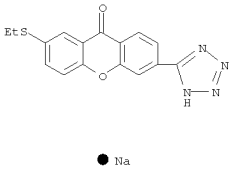
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L15 ANSWER 1085 OF 1090 REGISTRY COPYRIGHT 2009 ACS on STN
RN 110165-61-2 REGISTRY
ED Entered STN: 05 Sep 1987
CN Hydrazinecarboximidamide, 2-[7-chloro-3,4,9,10-tetrahydro-9-oxo-3-[4-(trifluoromethyl)phenyl]-1(2H)-acridinylidene]-N-hydroxy- (CA INDEX NAME)
MF C21 H17 Cl F3 N5 O2
CI COM
SR CA

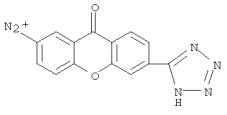


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

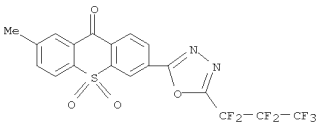
L15 ANSWER 1086 OF 1090 REGISTRY COPYRIGHT 2009 ACS on STN
RN 89491-78-1 REGISTRY
ED Entered STN: 16 Nov 1984
CN 9H-Xanthen-9-one, 2-(ethylthio)-6-(2H-tetrazol-5-yl)-, sodium salt (1:1) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 9H-Xanthen-9-one, 2-(ethylthio)-6-(1H-tetrazol-5-yl)-, sodium salt (9CI)
MF C16 H12 N4 O2 S . Na
CRN (89217-53-8)



L15 ANSWER 1087 OF 1090 REGISTRY COPYRIGHT 2009 ACS on STN
RN 89217-66-3 REGISTRY
ED Entered STN: 16 Nov 1984
CN 9H-Xanthene-2-diazonium, 9-oxo-6-(2H-tetrazol-5-yl)- (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 9H-Xanthene-2-diazonium, 9-oxo-6-(1H-tetrazol-5-yl)- (9CI)
MF C14 H7 N6 O2
CI COM

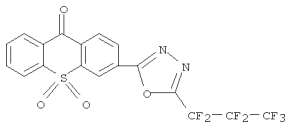


L15 ANSWER 1088 OF 1090 REGISTRY COPYRIGHT 2009 ACS on STN
RN 59965-52-5 REGISTRY
ED Entered STN: 16 Nov 1984
CN 9H-Thioxanthen-9-one, 6-[5-(1,1,2,2,3,3,3-heptafluoropropyl)-1,3,4-oxadiazol-2-yl]-2-methyl-, 10,10-dioxide (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 9H-Thioxanthen-9-one, 6-[5-(heptafluoropropyl)-1,3,4-oxadiazol-2-yl]-2-methyl-, 10,10-dioxide (9CI)
OTHER NAMES:
CN HF 374C
MF C19 H9 F7 N2 O4 S



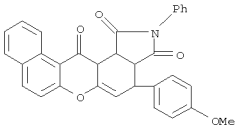
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L15 ANSWER 1089 OF 1090 REGISTRY COPYRIGHT 2009 ACS on STN
RN 59954-02-8 REGISTRY
ED Entered STN: 16 Nov 1984
CN 9H-Thioxanthen-9-one, 3-[5-(1,1,2,2,3,3,3-heptafluoropropyl)-1,3,4-oxadiazol-2-yl]-, 10,10-dioxide (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 9H-Thioxanthen-9-one, 3-[5-(heptafluoropropyl)-1,3,4-oxadiazol-2-yl]-, 10,10-dioxide (9CI)
OTHER NAMES:
CN HF 59C
MF C18 H7 F7 N2 O4 S



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L15 ANSWER 1090 OF 1090 REGISTRY COPYRIGHT 2009 ACS on STN
RN 38187-31-4 REGISTRY
ED Entered STN: 16 Nov 1984
CN Naphtho[1',2':5,6]pyrano[3,2-e]isoindole-1,3,13(2H)-trione, 3a,4,13a,13b-tetrahydro-4-(4-methoxyphenyl)-2-phenyl- (CA INDEX NAME)
MF C32 H23 N O5
LC STN Files: BEILSTEIN*
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

=> fil caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	219.80	617.74

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-1.64

FILE 'CAPLUS' ENTERED AT 09:58:08 ON 03 NOV 2009

FILE COVERS 1907 - 3 Nov 2009 VOL 151 ISS 19
FILE LAST UPDATED: 2 Nov 2009 (20091102/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2009

```
L8            1 S L6 NOT L7

     FILE 'CAPLUS' ENTERED AT 09:51:52 ON 03 NOV 2009
L9            2 S L7

     FILE 'REGISTRY' ENTERED AT 09:55:16 ON 03 NOV 2009
L10             STRUCTURE UPLOADED
L11           0 S L10
L12          15 S L10 FULL
L13           2 S L12 NOT L6
L14        1391 S L3 AND CAPLUS/LC
L15        1090 S L3 NOT L14

     FILE 'CAPLUS' ENTERED AT 09:58:08 ON 03 NOV 2009

=> s l14
L16         238 L14

=> s l16 and DNA-PK
         985315 DNA
          21219 DNAS
         988681 DNA
                  (DNA OR DNAS)
          27251 PK
           2985 PKS
          29891 PK
                  (PK OR PKS)
           1070 DNA-PK
                  (DNA(W)PK)
```

L17 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2004:817876 CAPLUS
DN 141:314155
TI Preparation of xanthenone and acridinone DNA-PK inhibitors as cancer treatment potentiators
IN Halbrook, James W.; Kesicki, Edward A.; Burgess, Laurence Edward; Schlachter, Stephen T.; Eary, Charles T.; Schiro, Justin G.
PA Icos Corporation, USA
SO PCT Int. Appl., 149 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004085418	A2	20041007	WO 2004-US8459	20040319
	WO 2004085418	A3	20050127		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2004223866	A1	20041007	AU 2004-223866	20040319
	CA 2523178	A1	20041007	CA 2004-2523178	20040319
	EP 1660473	A2	20060531	EP 2004-757891	20040319
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
	JP 2006523681	T	20061019	JP 2006-507373	20040319
	US 20070167441	A1	20070719	US 2006-550978	20061211
PRAI	US 2003-456999P	P	20030324		
	WO 2004-US8459	W	20040319		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OS MARPAT 141:314155
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

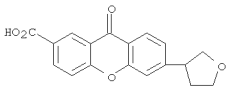
=> d l16 230-238 ibib abs hitstr

L16 ANSWER 230 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1974:82667 CAPLUS
DOCUMENT NUMBER: 80:82667
ORIGINAL REFERENCE NO.: 80:13297a,13300a
TITLE: Heterocyclic-substituted xanthonecarboxylic acid compounds
INVENTOR(S): Pfister, Jurg R.; Harrison, Ian T.; Fried, John H.
PATENT ASSIGNEE(S): Syntex Corp.
SOURCE: Ger. Offen., 45 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2234258	A1	19731206	DE 1972-2234258	19720712
US 3835157	A	19740910	US 1972-254232	19720517
NL 7209624	A	19731120	NL 1972-9624	19720712
FR 2184572	A1	19731228	FR 1972-25346	19720712
JP 49026282	A	19740308	JP 1972-69849	19720712
GB 1394584	A	19750521	GB 1972-32540	19720712
GB 1394585	A	19750521	GB 1974-44679	19720712

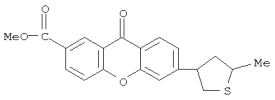
PRIORITY APPLN. INFO.: US 1972-254232 A 19720517

GI For diagram(s), see printed CA Issue.
AB Antihistaminic xanthonecarboxylates I (R = 5-methyl-3-furyl, 5-methyl-3-thienyl, 5-methyltetrahydro-3-furyl, 5-methyltetrahydro-3-thienyl, its 1-oxide or 1,1-dioxide, 6-mehtyltetrahydropyran-3-yl, 5-methyltetrahydrothiopyran-3-yl) were prepared Thus, 2,4-(MeO2C)2C6H3Br was treated with p-HOC6H4CH2CH:CH2 and the 2,4-(MeO2C)2C6H3OC6H4CH2CH:CH2-p hydrolyzed to the free acid, cyclized, and esterified to give I (R = CH2CH:CH2). NaIO4 oxidation gave I (R = CH2CHO), which with ClCH2COMe gave I (R = CH2(CHO)CH2COMe). Cyclization with acid gave I (R = 5-methyl-3-furyl), and cyclization in the presence of P2S5 yielded I (R = 5-methyl-3-thienyl).
IT 51775-93-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(esterification of)
RN 51775-93-0 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 9-oxo-6-(tetrahydro-3-furanyl)- (CA INDEX NAME)

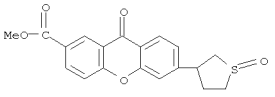


IT 51775-80-5P 51775-81-6P 51775-82-7P
51775-84-9P 51775-86-1P 51775-87-2P
51775-88-3P 51775-91-8P 51775-94-1P
51775-96-3P 51775-97-4P 51775-99-6P
51776-00-2P 51823-27-9P
RL: SPN (Synthetic preparation); PREP (Preparation)

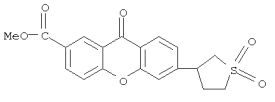
L16 ANSWER 230 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)
RN 51775-86-1 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 9-oxo-6-(tetrahydro-5-methyl-3-thienyl)-, methyl ester (CA INDEX NAME)



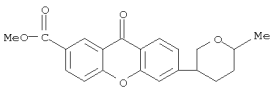
RN 51775-87-2 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 9-oxo-6-(tetrahydro-1-oxido-3-thienyl)-, methyl ester (CA INDEX NAME)



RN 51775-88-3 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 9-oxo-6-(tetrahydro-1,1-dioxido-3-thienyl)-, methyl ester (CA INDEX NAME)

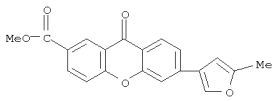


RN 51775-91-8 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 9-oxo-6-(tetrahydro-6-methyl-2H-pyran-3-yl)-, methyl ester (CA INDEX NAME)

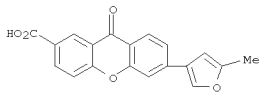


RN 51775-94-1 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 9-oxo-6-(tetrahydro-3-furanyl)-, methyl

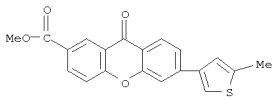
L16 ANSWER 230 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)
(prepn. of)
RN 51775-80-5 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 6-(5-methyl-3-furanyl)-9-oxo-, methyl ester (CA INDEX NAME)



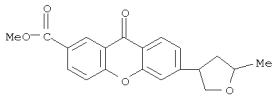
RN 51775-81-6 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 6-(5-methyl-3-furanyl)-9-oxo- (CA INDEX NAME)



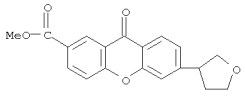
RN 51775-82-7 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 6-(5-methyl-3-thienyl)-9-oxo-, methyl ester (CA INDEX NAME)



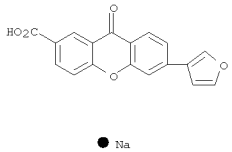
RN 51775-84-9 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 9-oxo-6-(tetrahydro-5-methyl-3-furanyl)-, methyl ester (CA INDEX NAME)



L16 ANSWER 230 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)
ester (CA INDEX NAME)

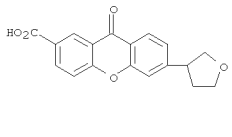


RN 51775-96-3 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 6-(3-furanyl)-9-oxo-, sodium salt (1:1) (CA INDEX NAME)



● Na

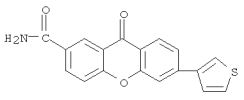
RN 51775-97-4 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 9-oxo-6-(tetrahydro-3-furanyl)-, ammonium salt (1:1) (CA INDEX NAME)



● NH_3

RN 51775-99-6 CAPLUS
CN 9H-Xanthene-2-carboxamide, 9-oxo-6-(3-thienyl)- (CA INDEX NAME)

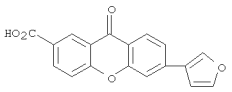
L16 ANSWER 230 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



RN 51776-00-2 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 6-(3-furanyl)-9-oxo-, compd. with 2-(diethylamino)ethyl 4-aminobenzoate (1:1) (CA INDEX NAME)

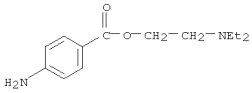
CM 1

CRN 51775-95-2
CMF C18 H10 O5

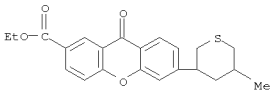


CM 2

CRN 59-46-1
CMF C13 H20 N2 O2

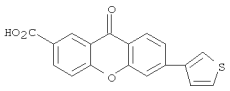


RN 51823-27-9 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 9-oxo-6-(tetrahydro-5-methyl-2H-thiopyran-3-yl)-, ethyl ester (CA INDEX NAME)

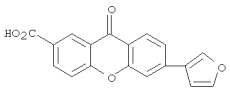


IT 51775-98-5
RL: RCT (Reactant); RACT (Reactant or reagent)

L16 ANSWER 230 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)
(reaction of, with ammonia)
RN 51775-98-5 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 9-oxo-6-(3-thienyl)- (CA INDEX NAME)



IT 51775-95-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with sodium hydroxide)
RN 51775-95-2 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 6-(3-furanyl)-9-oxo- (CA INDEX NAME)

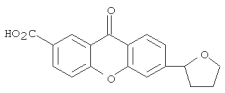


L16 ANSWER 231 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1974:82663 CAPLUS
DOCUMENT NUMBER: 80:82663
ORIGINAL REFERENCE NO.: 80:13297a,13300a
TITLE: Heterocyclic-substituted xanthonecarboxylic acid compounds
INVENTOR(S): Pfister, Jurg R.; Harrison, Ian T.; Fried, John H.
PATENT ASSIGNEE(S): Syntex Corp.
SOURCE: Ger. Offen., 51 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

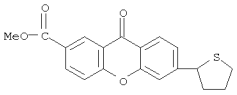
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2234257	A1	19731206	DE 1972-2234257	19720712
US 3835158	A	19740910	US 1972-254233	19720517
NL 7209623	A	19731120	NL 1972-9623	19720712
FR 2184573	A1	19731228	FR 1972-25348	19720712
AU 7244461	A	19740117	AU 1972-44461	19720712
ZA 7204759	A	19740227	ZA 1972-4759	19720712
JP 49024964	A	19740305	JP 1972-69848	19720712
GB 1393412	A	19750507	GB 1972-32539	19720712
GB 1393413	A	19750507	GB 1974-41751	19720712
GB 1393414	A	19750507	GB 1974-41754	19720712
AT 325039	B	19750925	AT 1972-5990	19720712
AT 325044	B	19750925	AT 1972-325044	19720712
AT 325045	B	19750925	AT 1972-325045	19720712
IL 39888	A	19751015	IL 1972-39888	19720712
SE 387947	B	19760920	SE 1972-9202	19720712
NO 135826	B	19770228	NO 1972-2498	19720712
BE 799580	A1	19731116	BE 1973-131149	19730516
DK 7406680	A	19750602	DK 1974-6680	19741219
PRIORITY APPLN. INFO.:			US 1972-254233 A	19720517
			DK 1972-3478 A	19720712

GI For diagram(s), see printed CA Issue.
AB Anti-histaminic xanthonecarboxylic acids I (R = tetrahydro-2-furyl, tetrahydro-2-thienyl or its 1-oxide or 1,1-dioxide , 2-furyl, 2-thienyl, 2,5-dihydro-5-oxo-2-furyl) were prepared Thus, Me xanthene-2-carboxylate was treated with Cl(CH2)3COCl, the II (R1 = Cl(CH2)3CO) reduced, and the II (R1 = Cl(CH2)3CHOH) cyclized with NaH, oxidized with CrO3-pyridine, followed by hydrolysis of the ester group to give I (R = tetrahydro-2-furyl.
IT 51775-54-3P 51775-57-6P 51775-58-7P
51775-59-8P 51775-60-1P 51775-66-7P
51775-70-3P 51775-71-4P 51775-72-5P
51775-73-6P 51775-74-7P 51823-25-7P
51823-34-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 51775-54-3 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 9-oxo-6-(tetrahydro-2-furanyl)- (CA INDEX NAME)

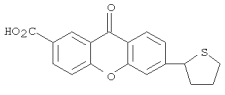
L16 ANSWER 231 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



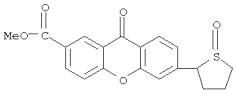
RN 51775-57-6 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 9-oxo-6-(tetrahydro-2-thienyl)-, methyl ester (CA INDEX NAME)



RN 51775-58-7 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 9-oxo-6-(tetrahydro-2-thienyl)- (CA INDEX NAME)

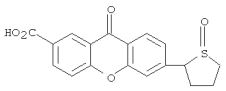


RN 51775-59-8 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 9-oxo-6-(tetrahydro-1-oxido-2-thienyl)-, methyl ester (CA INDEX NAME)

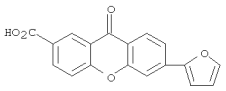


RN 51775-60-1 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 9-oxo-6-(tetrahydro-1-oxido-2-thienyl)- (CA INDEX NAME)

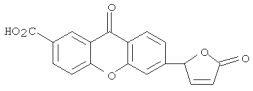
L16 ANSWER 231 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



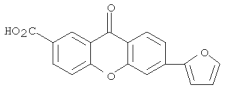
RN 51775-66-7 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 6-(2-furanyl)-9-oxo- (CA INDEX NAME)



RN 51775-70-3 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 6-(2,5-dihydro-5-oxo-2-furanyl)-9-oxo- (CA
INDEX NAME)



RN 51775-71-4 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 6-(2-furanyl)-9-oxo-, sodium salt (1:1)
(CA INDEX NAME)

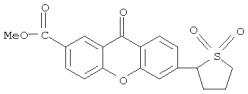


● Na

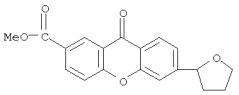
RN 51775-72-5 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 9-oxo-6-(tetrahydro-5-oxo-2-furanyl)-,
ammonium salt (1:1) (CA INDEX NAME)

L16 ANSWER 231 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)

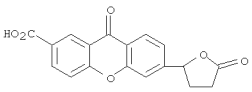
RN 51823-25-7 CAPLUS
CN 9H-Xanthene-2-carboxylic acid,
9-oxo-6-(tetrahydro-1,1-dioxido-2-thienyl)-
, methyl ester (CA INDEX NAME)



RN 51823-34-8 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 9-oxo-6-(tetrahydro-2-furanyl)-, methyl
ester (CA INDEX NAME)

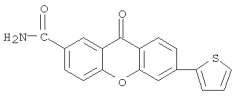


L16 ANSWER 231 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



● NH_3

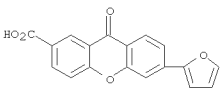
RN 51775-73-6 CAPLUS
CN 9H-Xanthene-2-carboxamide, 9-oxo-6-(2-thienyl)- (CA INDEX NAME)



RN 51775-74-7 CAPLUS
CN 9H-Xanthene-2-carboxylic acid, 6-(2-furanyl)-9-oxo-, compd. with
2-(diethylamino)ethyl 4-aminobenzoate (1:1) (CA INDEX NAME)

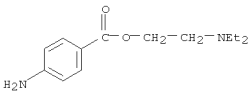
CM 1

CRN 51775-66-7
CMF C18 H10 O5



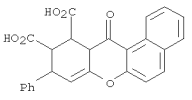
CM 2

CRN 59-46-1
CMF C13 H20 N2 O2

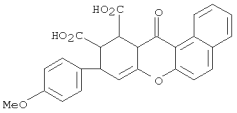


L16 ANSWER 232 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1972:551815 CAPLUS
DOCUMENT NUMBER: 77:151815
ORIGINAL REFERENCE NO.: 77:24955a,24958a
TITLE: Some reactions with 3-methyl-1H-naphtho[2,1-b]pyran-1-one
AUTHOR(S): Sammour, A.; Zimaity, T.; Kamel, S.
CORPORATE SOURCE: Fac. Sci., Ain Shams Univ., Cairo, Egypt
SOURCE: Journal fuer Praktische Chemie (Leipzig) (1972), 314(2), 271-80
CODEN: JPCEAO; ISSN: 0021-8383
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB Reaction of the title compound (I) with RCHO in EtOH containing EtONa gave the
styrene derivs. II [R = Ph, p-Me-OC6H4, 3,4-(methylenedioxy)phenyl, p-Me2NC6H4, p-O2NC6H4, o-O2NC6H4]. Reaction of I with P2S5 and HONH2.HCl gave the thione III and 3-methyl(or 2-hydroxy-1-naphthyl)-5-[2-hydroxy-1-naphthyl(or methyl)]isoxzole, resp. Reaction of I with H2NNH2.H2O-EtOH at 90° gave 3-methyl(or 2-hydroxy-1-naphthyl)-5-[2-hydroxy-1-naphthyl(or methyl)]pyrazole. Reaction of I with phthalic anhydride, succinic anhydride, or maleic anhydride in the presence of ZnCl2 6 hr at 200-20° gave the diketones IV (Q = o-C6H4, CH2CH2, CH:CH, resp.).
IT 38187-28-9P 38187-29-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 38187-28-9 CAPLUS
CN 9H-Benzo[a]xanthene-10,11-dicarboxylic acid, 10,11,11a,12-tetrahydro-12-oxo-9-phenyl- (CA INDEX NAME)



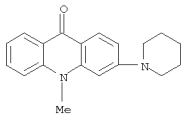
RN 38187-29-0 CAPLUS
CN 9H-Benzo[a]xanthene-10,11-dicarboxylic acid, 10,11,11a,12-tetrahydro-9-(4-methoxyphenyl)-12-oxo- (CA INDEX NAME)



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD
(3 CITINGS)

L16 ANSWER 232 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)

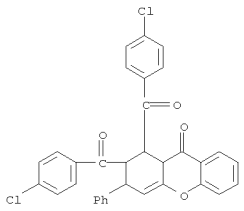
L16 ANSWER 233 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1972:34084 CAPLUS
DOCUMENT NUMBER: 76:34084
ORIGINAL REFERENCE NO.: 76:5519a,5522a
TITLE: Acridone studies. VIII. Preparation and properties of monobromo-, nitro-, amino-, and piperidino-10-methylacridones
AUTHOR(S): Hodgeman, D. K. C.; Prager, R. H.
CORPORATE SOURCE: Org. Chem. Dep., Univ. Adelaide, Adelaide, Australia
SOURCE: Australian Journal of Chemistry (1972), 25(1), 191-9
CODEN: AJCHAS; ISSN: 0004-9425
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The preparation and spectral properties of monobromo-, nitro-, amino-, and piperidino-10-methylacridone are described.
IT 34811-61-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 34811-61-5 CAPLUS
CN 9(10H)-Acridinone, 10-methyl-3-(1-piperidinyl)- (CA INDEX NAME)



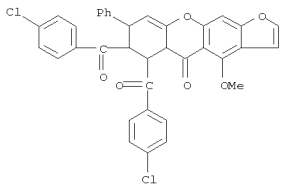
OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)

L16 ANSWER 234 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1962:462600 CAPLUS
DOCUMENT NUMBER: 57:62600
ORIGINAL REFERENCE NO.: 57:12413h-i,12414a-d
TITLE: Diels-Alder reaction. Experiments with 2,6-distyryl-γ-pyrone and 2-styrylchromones
AUTHOR(S): Aziz, Gamil
CORPORATE SOURCE: Univ. Cairo, Giza, Egypt
SOURCE: Journal of Organic Chemistry (1962), 27, 2954-7
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Expts. were carried out with 2,6-distyryl-γ-pyrone (I) and 2-styrylchromones. 2,6-Dimethylpyrone (1 g.) in 15 ml. alc. treated with 1.7 g. BzH, left overnight with 0.43 g. Na in 15 ml. alc., and crystallized gave 0.75 g. 1, flakes, m. 168° (alc.). I (1 g.) and 1.55 g. trans-dibenzoylethylene in 50 ml. anisole refluxed 25 hrs. gave 0.25 g. 4a,5,6,7-tetrahydro-5,6-dibenzoyl-7-phenyl-2-styrylchromone (II), m. 242°. Repetition of the reaction using 1 g. I and 3.1 g. trans-dibenzoyl-ethylene and heating 35 hrs. gave 0.3 g. II. II (0.3 g.) in 200 ml. alc. refluxed 3 hrs. with 0.78 g. NH2OH.HCl and 1.2 g. NaOAc gave unchanged II. When the reaction was repeated using PhNHNH2 and NaOAc or 2,4 dinitrophenyl-hydrazine, II was still recovered. The following adducts were formed by the above method (compound formed, g. styryl compound, g. dienophile used, solvent, ml. solvent, time of heating, solvent of crystallization, m.p. of product, and yield in g. given): 4a,5,6,7-tetrahydro-5,6-di-p-toluoyl-7-phenyl-2-styrylchromone, 1, 1.76, anisole, 50, 25, alc.-C6H6, 266°, 0.25; 4a,5,6,7-tetrahydro-5,6-dichlorodibenzoyl-7-phenyl-2-styrylchromone, 1, 2.34, anisole, 40, 30, C6H6-ligroine, 248°, 0.24; 7-phenyl-2-styryl-4a,5,6,7-tetrahydrochromone-N-phenyl-5,6-dicarboximide, 0.5, 1.1, xylene, 30, 10, Me2CO, 292°, 0.26. 2-Styrylchromone (1 g.) and 1.22 g. trans-p,p'-dichlorodibenzoylethylene, in 40 ml. anisole heated 30 hrs. gave 0.05 g. starting material and 0.15 g. 1,2,3,9a-tetra-hydro-1,2-bis(p-chlorobenzoyl)-9-oxo-3-phenylxanthene, m. 21.5°. The following results were similarly obtained (adduct, styryl compound, g. compound, g. dienophile, time of heating, volume of anisole, solvent of crystallization, m.p. of product, and yield in g. given): 5a,6,7,8-tetrahydro-6,7-bis(p-chloro-benzoyl)-4,11-dimethoxy-4-oxo-5H-8-phenylfuro[3,2-b]-xanthene, 2-styrylkhellin, 0.7, 0.6, 30, 2.5, C6H6-ligroine, 230°, 0.21; 5a,6,7,8-tetrahydro-6,7-dibenzoyl-4-methoxy-5-oxo-5H-8-phenylfuro[3,2-b]-xanthene, 2-styrylvisnagin, 1, 0.42, 30, 35, alc.-C6H6, 246°, 0.26; 5a,6,7,8-tetrahydro-6,7-bis(p-chlorobenzoyl)-4-methoxy-5-oxo-5H-phenylfuro[3,2-b]-xanthene, 2-styrylvisnagin, 0.58, 0.5, 35, 25, C6H6-ligroine, 258°, 0.25.
IT 96975-47-2P, Xanthen-9-one, 1,2-bis(p-chlorobenzoyl)-1,2,3,9a-tetrahydro-3-phenyl-
105003-69-8P, 5H-Furo[3,2-b]xanthen-5-one, 6,7-bis(p-chlorobenzoyl)-5a,6,7,8-tetrahydro-4-methoxy-8-phenyl-
105123-31-7P, 5H-Furo[3,2-b]xanthen-5-one, 6,7-dibenzoyl-5a,6,7,8-tetrahydro-4-methoxy-8-phenyl-
108040-65-9P, 5H-Furo[3,2-b]xanthen-5-one, 6,7-bis(p-chlorobenzoyl)-5a,6,7,8-tetrahydro-4,11-dimethoxy-8-phenyl-
RL: PREP (Preparation)
(preparation of)

L16 ANSWER 234 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)
RN 96975-47-2 CAPLUS
CN 9H-Xanthen-9-one, 1,2-bis(4-chlorobenzoyl)-1,2,3,9a-tetrahydro-3-phenyl- (CA INDEX NAME)

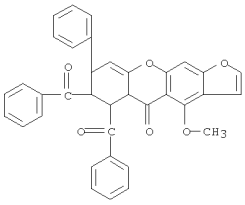


RN 105003-69-8 CAPLUS
CN 5H-Furo[3,2-b]xanthen-5-one, 6,7-bis(4-chlorobenzoyl)-5a,6,7,8-tetrahydro-4-methoxy-8-phenyl- (CA INDEX NAME)

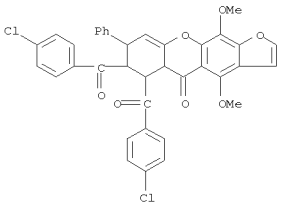


RN 105123-31-7 CAPLUS
CN 5H-Furo[3,2-b]xanthen-5-one, 6,7-dibenzoyl-5a,6,7,8-tetrahydro-4-methoxy-8-phenyl- (CA INDEX NAME)

L16 ANSWER 234 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



RN 108040-65-9 CAPLUS
CN 5H-Furo[3,2-b]xanthen-5-one, 6,7-bis(4-chlorobenzoyl)-5a,6,7,8-tetrahydro-4,11-dimethoxy-8-phenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

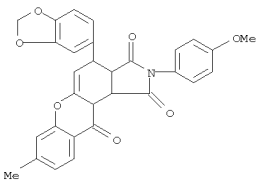
L16 ANSWER 235 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1957:99120 CAPLUS
DOCUMENT NUMBER: 51:99120
ORIGINAL REFERENCE NO.: 51:17912f-i,17913a-d
TITLE: 2-Styrylchromones in the diene synthesis
AUTHOR(S): Mustafa, Ahmed; Ali, Mohamed Ibrahim
CORPORATE SOURCE: Cairo Univ., Egypt
SOURCE: Journal of Organic Chemistry (1956), 21, 849-51
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB cf. C.A. 49, 13234b. Xanthone derivs. are formed by the Diels-Alder reaction from 2-styrylchromones (I) having conjugated double bonds, one of which is part of the heterocyclic ring. New I were made by adding alc. NaOEt (from 0.02 g. atom of Na and 20 ml. of absolute EtOH) to 0.02 mole of 2-methylchromone and 0.02 mole of an aromatic aldehyde in 40 ml. of absolute EtOH, allowing the mixture to stand at 25° for 24 hrs., filtering off the solid product, washing with cold EtOH (II), and crystallizing from II or xylene (III). The following chromones were prepared (% yield, m.p., crystallizing solvent, and color in H2SO4 given): 2-(3,4-methylenedioxystyryl) (IV), 80, 209-10°, II, deep red; 2-(p-methoxystyryl)-6-methyl (V), 84, 162-3°, II, red; 2-(o-ethoxystyryl)-6-methyl (VI), 76, 125-6°, II, orange; 2-(3,4-methylenedioxystyryl)-6-methyl (VII), 85, 194-5°, III, deep red; 2-(3,4-methylenedioxystyryl)-7,8-benzo (VIII), 72, 230-1°, III, deep red. I (0.7 g.) and an N-arylmaleimide (1 g.) in 25 ml. of freshly distilled PhOEt (IX), PhNO2 (X), or III were refluxed 10-15 hrs., the resulting solid 1,2,3,9a-tetrahydro-9-oxo-3-aryl-N-aryl'-1,2-xanthenedicarboximides washed with C6H6, and crystallized from IX, X, Ac2O (XI) or PhOMe (XII). The starting chromone, N-arylmaleimide, 1,2,3,9a-tetrahydro-9-oxo-1,2-xanthenedicarboximide formed, % yield, m.p., reaction solvent, crystallization solvent, and color with H2SO4 are listed: 2-styrylchromone (XIII), N-phenyl (XIV), 3-phenyl-N-phenyl, 75, 252-4°, III, III, orange; XIII, N-(p-methoxyphenyl) (XV), 3-phenyl-N-(p-methoxyphenyl), 68, 264-6°, III, III, orange; XIII, N-(p-ethoxyphenyl) (XVI), 3-phenyl-N-(p-ethoxyphenyl), 72, 271-3°, III, III, orange; XIII, N-(2,4-dimethylphenyl), 3-phenyl-N-(2,4-dimethylphenyl), 60, 241-2°, yellow; 2-(p-methoxystyryl)chromone (XVII), XIV, 3-(p-methoxyphenyl)-N-phenyl, 74, 240-1°, III, dioxane-petr. ether (60-80°), orange-yellow; XVII, XVI, 3-(p-methoxyphenyl)-N-(p-ethoxyphenyl), 65, 214-15°, III, III, orange; IV, XIV, 3-(3',4'-methylenedioxyphenyl)-N-phenyl, 68, above 300°, X, X, red; IV, XV, 3-(3,4-methylenedioxyphenyl)-N-(p-methoxyphenyl), 65, 296-8°, X, X, brown-red; V, XIV, 3-(p-methoxyphenyl)-6-methyl-N-phenyl, 78, 242-3°, IX, IX, yellow; V, XV, 3-(p-methoxyphenyl)-6-methyl-N-(p-methoxyphenyl), 75, 266-8°, IX, IX, orange; V, XVI, 3-(p-methoxyphenyl)-6-methyl-N-(p-ethoxyphenyl), 84, 257-9°, IX, IX, orange; VI, XIV, 3-(o-ethoxyphenyl)-6-methyl-N-phenyl, 74, 233-5°, IX, IX, yellow; VI, XVI,

L16 ANSWER 235 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)
6-methyl-3-(o-ethoxyphenyl)-6-methyl-N-(p-ethoxyphenyl), 63, 225-6°, IX, IX, orange; VII, XIV, 3-(3,4-methylenedioxyphenyl)-6-methyl-N-phenyl (XVIII), 54, 215°, X, XI, brown-red; VII, XV, 3-(3,4-methylenedioxyphenyl)-6-methyl-N-(p-methoxyphenyl), 57, 315, X, X, brown-red; 2-styryl-7,8-benzochromone (XIX), XIV, 3-phenyl-N-phenyl-7,8-benzo, 64, 306-8°, IX, XI, orange; XIX, XV, 3-phenyl-N-(p-methoxyphenyl)-7,8-benzo, 58, 267-9°, X, XII, orange; VIII, XIV, 3-(3,4-methylenedioxyphenyl)-N-phenyl-7,8-benzo, 72, 288-9°, X, IX, brown-red; VIII, XV, 3-(3,4-methylenedioxyphenyl)-N-(p-methoxyphenyl)-7,8-benzo, 75, 218-9°, X, X, brown-red. XVIII (0.8 g.) in 50 ml. MeOH with 1 g. NaOH, refluxed for 2 hrs., filtered hot, and acidified with cold dil. HCl gave 0.35 g. 1,2,3,9a-tetrahydro-9-oxo-3-(3,4-methylenedioxyphenyl)-1,2-xanthenedicarboxylic acid (XX), decomp. 250° (from HOAc). XX is also formed in 75% yield from VII (0.5 g.), 1 g. of maleic acid, and 25 ml. of IX after reflux for 15 hrs.

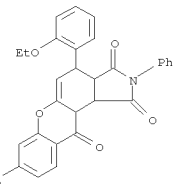
IT 1082709-14-5P 1082709-32-7P 1087729-11-0P
1087729-13-2P 1087729-23-4P 1087729-31-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(2-Styrylchromones in the diene synthesis)

RN 1082709-14-5 CAPLUS
CN [1]Benzopyrano[3,2-e]isoindole-1,3,11(2H)-trione, 4-(1,3-benzodioxol-5-yl)-3a,4,11a,11b-tetrahydro-2-(4-methoxyphenyl)-8-methyl- (CA INDEX NAME)

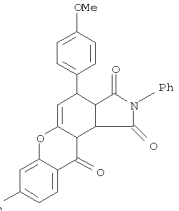


RN 1082709-32-7 CAPLUS
CN [1]Benzopyrano[3,2-e]isoindole-1,3,11(2H)-trione, 4-(2-ethoxyphenyl)-3a,4,11a,11b-tetrahydro-8-methyl-2-phenyl- (CA INDEX NAME)

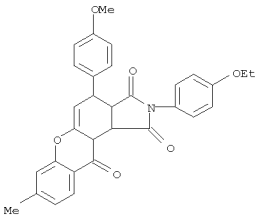
L16 ANSWER 235 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



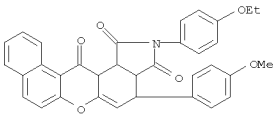
RN 1087729-11-0 CAPLUS
CN [1]Benzopyrano[3,2-e]isoindole-1,3,11(2H)-trione, 3a,4,11a,11b-tetrahydro-4-(4-methoxyphenyl)-8-methyl-2-phenyl- (CA INDEX NAME)



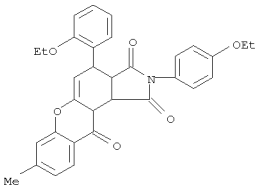
RN 1087729-13-2 CAPLUS
CN [1]Benzopyrano[3,2-e]isoindole-1,3,11(2H)-trione, 2-(4-ethoxyphenyl)-3a,4,11a,11b-tetrahydro-4-(4-methoxyphenyl)-8-methyl- (CA INDEX NAME)



RN 1087729-23-4 CAPLUS
CN Naphtho[1',2':5,6]pyrano[3,2-e]isoindole-1,3,13(2H)-trione, 2-(4-ethoxyphenyl)-3a,4,13a,13b-tetrahydro-4-(4-methoxyphenyl)- (CA INDEX NAME)



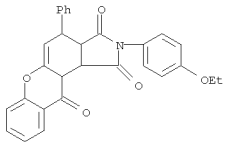
RN 1087729-31-4 CAPLUS
CN [1]Benzopyrano[3,2-e]isoindole-1,3,11(2H)-trione, 4-(2-ethoxyphenyl)-2-(4-ethoxyphenyl)-3a,4,11a,11b-tetrahydro-8-methyl- (CA INDEX NAME)



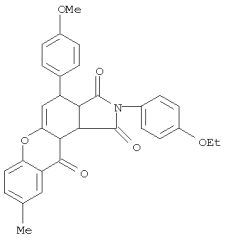
IT 103166-40-1P, Xanthene-1,2-dicarboximide, N-(p-ethoxyphenyl)-1,2,3,9a-tetrahydro-9-oxo-3-phenyl- 103271-61-0P, Xanthene-1,2-dicarboximide,

N-(p-ethoxyphenyl)-1,2,3,9a-tetrahydro-3-(p-methoxyphenyl)-7-methyl-9-oxo- 103329-11-9P, Xanthene-1,2-dicarboximide, N-(p-ethoxyphenyl)-1,2,3,9a-tetrahydro-3-(p-methoxyphenyl)-9-oxo- 103329-12-0P, Xanthene-1,2-dicarboximide, 1,2,3,9a-tetrahydro-N,3-bis(p-methoxyphenyl)-7-methyl-9-oxo- 114585-07-8P, Xanthene-1,2-dicarboxylic acid, 1,2,3,9a-tetrahydro-7-methyl-3-(3,4-methylenedioxyphenyl)-9-oxo- 115099-41-7P, Xanthene-1,2-dicarboximide, 1,2,3,9a-tetrahydro-9-oxo-3-phenyl-N-2,4-xylyl- 115099-43-9P, Xanthene-1,2-dicarboximide, 1,2,3,9a-tetrahydro-3-(p-methoxyphenyl)-7-methyl-9-oxo-N-phenyl- 115829-14-6P, Xanthene-1,2-dicarboximide, 1,2,3,9a-tetrahydro-3-(p-methoxyphenyl)-9-oxo-N-phenyl- 115829-22-6P, Xanthene-1,2-dicarboximide, 1,2,3,9a-tetrahydro-N-(p-methoxyphenyl)-9-oxo-3-phenyl- 115918-34-8P, Xanthene-1,2-dicarboximide, 3-(o-ethoxyphenyl)-1,2,3,9a-tetrahydro-7-methyl-9-oxo-N-phenyl- 116031-51-7P, Xanthene-1,2-dicarboximide, 3-(o-ethoxyphenyl)-N-(p-ethoxyphenyl)-1,2,3,9a-tetrahydro-7-methyl-9-oxo- 117900-61-5P, 7H-Benzo[c]xanthene-8,9-dicarboximide, 7a,8,9,10-tetrahydro-N-(p-methoxyphenyl)-10-(3,4-methylenedioxyphenyl)-7-oxo- 121656-69-7P, Xanthene-1,2-dicarboximide, 1,2,3,9a-tetrahydro-N-(p-methoxyphenyl)-7-methyl-3-(3,4-methylenedioxyphenyl)-9-oxo- 121677-99-4P, Xanthene-1,2-dicarboximide, 1,2,3,9a-tetrahydro-7-methyl-3-(3,4-methylenedioxyphenyl)-9-oxo-N-phenyl- 121678-00-0P, Xanthene-1,2-dicarboximide, 1,2,3,9a-tetrahydro-N-(p-methoxyphenyl)-3-(3,4-methylenedioxyphenyl)-9-oxo- 122117-97-9P, 7H-Benzo[c]xanthene-8,9-dicarboximide, 7a,8,9,10-tetrahydro-N-(p-methoxyphenyl)-7-oxo-10-phenyl- 860178-85-4P, Xanthene-1,2-dicarboximide, 1,2,3,9a-tetrahydro-3-(p-methoxyphenyl)-9-oxo-3-phenyl- RL: PREP (Preparation)
(prepn. of)

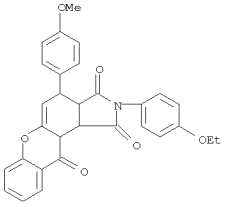
RN 103166-40-1 CAPLUS
CN [1]Benzopyrano[3,2-e]isoindole-1,3,11(2H)-trione, 2-(4-ethoxyphenyl)-3a,4,11a,11b-tetrahydro-4-phenyl- (CA INDEX NAME)



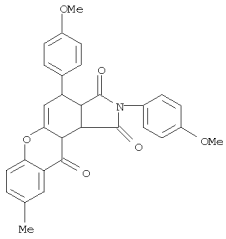
RN 103271-61-0 CAPLUS
CN [1]Benzopyrano[3,2-e]isoindole-1,3,11(2H)-trione, 2-(4-ethoxyphenyl)-3a,4,11a,11b-tetrahydro-4-(4-methoxyphenyl)-9-methyl- (CA INDEX NAME)



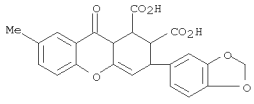
RN 103329-11-9 CAPLUS
CN [1]Benzopyrano[3,2-e]isoindole-1,3,11(2H)-trione, 2-(4-ethoxyphenyl)-3a,4,11a,11b-tetrahydro-4-(4-methoxyphenyl)- (CA INDEX NAME)



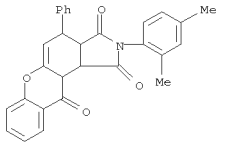
RN 103329-12-0 CAPLUS
CN [1]Benzopyrano[3,2-e]isoindole-1,3,11(2H)-trione, 3a,4,11a,11b-tetrahydro-2,4-bis(4-methoxyphenyl)-9-methyl- (CA INDEX NAME)



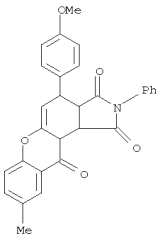
RN 114585-07-8 CAPLUS
CN 1H-Xanthene-1,2-dicarboxylic acid, 3-(1,3-benzodioxol-5-yl)-2,3,9,9a-tetrahydro-7-methyl-9-oxo- (CA INDEX NAME)



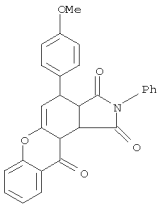
RN 115099-41-7 CAPLUS
CN [1]Benzopyrano[3,2-e]isoindole-1,3,11(2H)-trione, 2-(2,4-dimethylphenyl)-3a,4,11a,11b-tetrahydro-4-phenyl- (CA INDEX NAME)



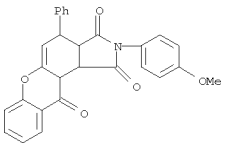
RN 115099-43-9 CAPLUS
CN [1]Benzopyrano[3,2-e]isoindole-1,3,11(2H)-trione, 3a,4,11a,11b-tetrahydro-4-(4-methoxyphenyl)-9-methyl-2-phenyl- (CA INDEX NAME)



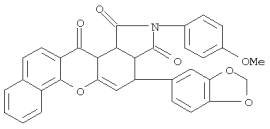
RN 115829-14-6 CAPLUS
CN [1]Benzopyrano[3,2-e]isoindole-1,3,11(2H)-trione, 3a,4,11a,11b-tetrahydro-4-(4-methoxyphenyl)-2-phenyl- (CA INDEX NAME)



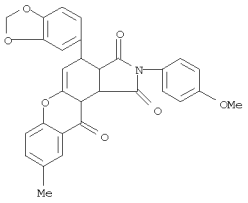
RN 115829-22-6 CAPLUS
CN [1]Benzopyrano[3,2-e]isoindole-1,3,11(2H)-trione, 3a,4,11a,11b-tetrahydro-2-(4-methoxyphenyl)-4-phenyl- (CA INDEX NAME)



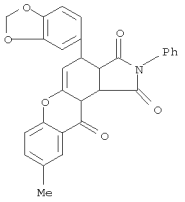
RN 115918-34-8 CAPLUS



RN 121656-69-7 CAPLUS
CN [1]Benzopyrano[3,2-e]isoindole-1,3,11(2H)-trione, 4-(1,3-benzodioxol-5-yl)-3a,4,11a,11b-tetrahydro-2-(4-methoxyphenyl)-9-methyl- (CA INDEX NAME)

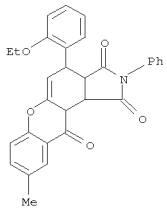


RN 121677-99-4 CAPLUS
CN [1]Benzopyrano[3,2-e]isoindole-1,3,11(2H)-trione, 4-(1,3-benzodioxol-5-yl)-3a,4,11a,11b-tetrahydro-9-methyl-2-phenyl- (CA INDEX NAME)

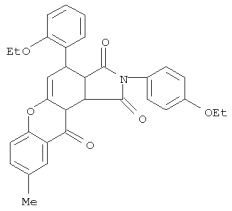


RN 121678-00-0 CAPLUS
CN [1]Benzopyrano[3,2-e]isoindole-1,3,11(2H)-trione, 4-(1,3-benzodioxol-5-yl)-3a,4,11a,11b-tetrahydro-2-(4-methoxyphenyl)-
(CA

CN [1]Benzopyrano[3,2-e]isoindole-1,3,11(2H)-trione, 4-(2-ethoxyphenyl)-3a,4,11a,11b-tetrahydro-9-methyl-2-phenyl- (CA INDEX NAME)

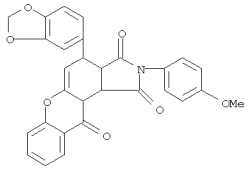


RN 116031-51-7 CAPLUS
CN [1]Benzopyrano[3,2-e]isoindole-1,3,11(2H)-trione, 4-(2-ethoxyphenyl)-2-(4-ethoxyphenyl)-3a,4,11a,11b-tetrahydro-9-methyl- (CA INDEX NAME)

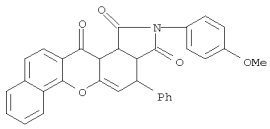


RN 117900-61-5 CAPLUS
CN Naphtho[2',1':5,6]pyrano[3,2-e]isoindole-1,3,13(2H)-trione, 4-(1,3-benzodioxol-5-yl)-3a,4,13a,13b-tetrahydro-2-(4-methoxyphenyl)-
(CA
INDEX NAME)

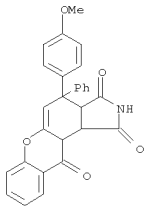
INDEX NAME)



RN 122117-97-9 CAPLUS
CN Naphtho[2',1':5,6]pyrano[3,2-e]isoindole-1,3,13(2H)-trione, 3a,4,13a,13b-tetrahydro-2-(4-methoxyphenyl)-4-phenyl- (CA INDEX NAME)



RN 860178-85-4 CAPLUS
CN [1]Benzopyrano[3,2-e]isoindole-1,3,11(2H)-trione, 3a,4,11a,11b-tetrahydro-4-(4-methoxyphenyl)-4-phenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD
(6 CITINGS)

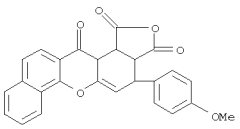
ACCESSION NUMBER: 1957:9351 CAPLUS
DOCUMENT NUMBER: 51:9351
ORIGINAL REFERENCE NO.: 51:1953b-i,1954a-b
TITLE: 2-Methyl-1,4-α-naphthopyrone and related substances
AUTHOR(S): Schonberg, Alexander; Fateen, Abd El Kader; Sammour, Abd El Maged Amine
CORPORATE SOURCE: Cairo Univ., Egypt
SOURCE: Journal of the American Chemical Society (1956), 78, 4689-92
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
OTHER SOURCE(S): CASREACT 51:9351

AB 2-Methyl-1,4-α-naphthopyrone (I) (1 g.) in a small volume of absolute EtOH treated at room temperature with 1 mole equivalent NaOEt in EtOH, the mixture treated with 1 mole equivalent of the appropriate aldehyde, and the yellow condensation product filtered off and recrystd. gave the corresponding 2-(2-arylstyryl)-1,4-α-naphthopyrone (II); addnl. II was obtained, in general, by dilution of the mother liquors with H2O; the II was precipitated in some cases only upon dilution with H2O. In this manner were prepared the following II (aryl group, g. weight of I, g. weight of aldehyde used, m.p., color of II, g. yield, and color with H2SO4 given): o-ClC6H4, 1, 0.7,228° (from EtOH or xylene), light yellow, 0.7, yellow (difficultly soluble in C6H6 or ligroine, b. 100-20°); p-O2NC6H4, 1, 0.6, 274-5° (from dioxane or xylene), deep yellow, 0.9, orange (difficultly soluble in C6H6, ligroine, or EtOH); 3,4-(EtO)2C6H3, 1, 0.9,168° (from ligroine), yellow, 0.5, orange (easily soluble in EtOH or C6H6); PhCH:CH, 1, 0.6, 169° (from aqueous EtOH), yellow-orange, 0.4, deep orange (easily soluble in C6H6 or EtOH, difficultly soluble in ligroine); 3,4-(CH2O2)C6H3, 1, 0.7, 232° (from ligroine or EtOH), yellow, 0.6, orange (soluble in C6H6). 2-Styryl-1,4-α-naphthopyrone (III) (2 g.) in 40 cc. 20% aqueous NaOH refluxed 20 hrs. and cooled, the filtrate acidified with H2SO4, washed with H2O, shaken with aqueous Na2CO3, and filtered, and the residue recrystd. from EtOH gave 0.6 g. 2-AcC10H6OH (IV); the filtrate acidified with H2SO4 deposited 0.4 g. PhCH:CHCO2H (V), m. 133°. II(0.6 g.) and 5 g. Na in 30 cc. absolute EtOH refluxed 30 hrs. gave 0.6 g. V and 0.8 g. IV. III (1 g.) and 10 equivs. maleic anhydride (VI) in 30 cc. xylene refluxed 15 hrs., concentrated, and cooled gave 70% adduct (VII) (R = Ph), almost colorless crystals, m. 279° (from xylene), pale yellow in concentrated H2SO4. p-MeOC6H4CH:CH analog (VIII) of III (1 g.) and 10 equivs. VI refluxed 15 hrs. in xylene gave 70% VII (R = p-MeOC6H4) (IX), m. 286° (from xylene), yellow in concentrated H2SO4. IX (0.5 g.) refluxed 50 min. with 1.5 g. NaOH in 18 cc. MeOH, the residue decomposed with HCl, the product dissolved in absolute MeOH, treated 2 hrs. with dry HCl, allowed to stand overnight, and evaporated, and the residue recrystd. from MeOH gave the di-Me ester (X) of the corresponding diacid, m. 199°, yellow in concentrated H2SO4. II (1 g.) and 4 g. succinic anhydride in 30 cc. dry xylene refluxed 15 hrs., concentrated, and cooled, the

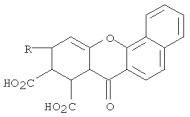
unchanged succinic anhydride (3:5 g.) filtered of, and the filtrate concd. gave 0.8 g. unchanged II. 2-Methyl-1,4-α-naphthopyrone (XI) (1 g.) and 1 g. P2S5 refluxed 2 hrs. in 30 cc. dry C6H6 on a steam bath and filtered, the residue extd. with boiling C6H6, and the combined filtrates evapd. to dryness gave 80% 2-methyl-4-thio-α-naphthopyrone (XII), violet-red needles, m. 162° (from EtOH), yellow with green fluorescence in concd. H2SO4. XII (1 g.) and 0.5 g. BzH in 20 cc. abs. EtOH contg. 6 drops piperidine refluxed 6 hrs. and filtered gave 0.8 g. 2-styryl-4-thio-α-naphthopyrone (XIII), violet crystals, m. 197° (from C6H6), orange in concd. H2SO4. XII (1 g.) and 0.6 g. p-MeOC6H4CHO refluxed gave 0.9 g. p-MeOC6H4CH:CH analog of XIII, violet crystals, m. 208° (from C6H6), orange in concd. H2SO4. XI (0.1 g.) in 1 cc. pyridine refluxed 4 hrs. with 0.12 g. NH2OH.HCl in 0.5 cc. H2O, cooled, acidified with dil. AcOH, and filtered gave 85% 2-[5(or 3)-methyl-3(or 5)-isoxazolyl]-1-naphthol (XIV), yellowish crystals, m. 181° (from C6H6), gave a violet color with alc. FeCl3. XIV in 10% aq. NaOH refluxed 1 hr., cooled, and acidified with dil. HCl gave unchanged XIV. XIV (0.5 g.) in 10 cc. 10% aq. NaOH shaken 15 min. with 0.5 g. BzCl yielded 0.6 g. Bz deriv., m. 126° (from aq. EtOH). I (1 g.) in 10 cc. EtOH warmed 15 min. with 5 g. 50% N2H4.H2O in 10 cc. warm EtOH, cooled, dild. with H2O, and filtered gave 2-[5(or 3)-methyl-3(or 5)-pyrazolyl]-1-naphthol (XV), colorless leaflets, m. 171°; it gave a deep green color with alc. FeCl3; di-Bz deriv., colorless crystals, m. 144-5° (from aq. EtOH), yellow in concd. H2SO4. PhNHNH2.HCl (0.7 g.) in 3 cc. H2O and 1 g. I in 10 cc. pyridine refluxed 4 hrs., cooled, and acidified with dil. AcOH gave 85% 1-Ph deriv. (XVI) of XV, almost colorless crystals, m. 143°; it gave a violet color with alc. FeCl3. II gave similarly the 5(or 3)-styryl analog of XVI, almost colorless needles, m. 223° (decompn.); it gave a violet color with alc. FeCl3.

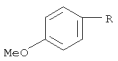
IT 122447-99-8P, 7H-Benzo[c]xanthene-8,9-dicarboxylic anhydride, 7a,8,9,10-tetrahydro-10-(p-methoxyphenyl)-7-oxo- 122924-91-8P, 7H-Benzo[c]xanthene-8,9-dicarboxylic acid, 7a,8,9,10-tetrahydro-10-(p-methoxyphenyl)-7-oxo- 124483-76-7P, 7H-Benzo[c]xanthene-8,9-dicarboxylic acid, 7a,8,9,10-tetrahydro-10-(p-methoxyphenyl)-7-oxo-, dimethyl ester
RL: PREP (Preparation)
(preparation of)

RN 122447-99-8 CAPLUS
CN 3H-Benzo[h]furo[3,4-a]xanthene-1,3,13-trione, 3a,4,13a,13b-tetrahydro-4-(4-methoxyphenyl)- (CA INDEX NAME)

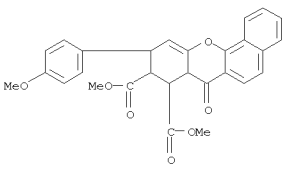


RN 122924-91-8 CAPLUS
CN 7H-Benzo[c]xanthene-8,9-dicarboxylic acid, 7a,8,9,10-tetrahydro-10-(4-methoxyphenyl)-7-oxo- (CA INDEX NAME)





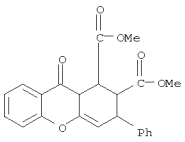
RN 124483-76-7 CAPLUS
CN 7H-Benzo[c]xanthene-8,9-dicarboxylic acid, 7a,8,9,10-tetrahydro-10-(4-methoxyphenyl)-7-oxo-, 8,9-dimethyl ester (CA INDEX NAME)



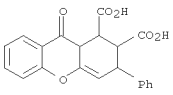
OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

L16 ANSWER 237 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1955:69083 CAPLUS
DOCUMENT NUMBER: 49:69083
ORIGINAL REFERENCE NO.: 49:13234a-g
TITLE: Diels-Alder reaction. II. Experiments with 2-styrylchromones. On the nature of the dimer of 1,3-diphenylisobenzofuran
AUTHOR(S): Schonberg, Alexander; Mustafa, Ahmed; Aziz, Gamil
CORPORATE SOURCE: Cairo Univ., Egypt
SOURCE: Journal of the American Chemical Society (1954), 76, 4576-7
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
GI For diagram(s), see printed CA Issue.
AB Xanthone derivs. may be obtained from 2-styrylchromones by Diels-Alder reactions. It seems possible that the dimer of 1,3-diphenylisobenzofuran (I) is a Diels-Alder adduct having the formula II. 2-Styrylchromone (III)
(1 g.) and 4 g. maleic anhydride in 30 cc. dry xylene refluxed 12 h., the mixture concentrated and cooled, and the crystalline deposit filtered off, washed with
hot EtOH, and recrystd. from xylene yielded about 0.65 g. 1,2,3,9a-tetrahydro-9-oxo-3-phenyl-1,2-xanthenedicarboxylic anhydride (IV), m. 246°. 4-MeO derivative of III (0.8 g). gave similarly during 0.5 h. heating in 30 cc. xylene 0.35 g. 3-p-MeOC6H4 analog of IV, m. 268°. Khellin (0.5 g.) and 0.25 g. BzH in 10 cc. absolute EtOH treated with cooling with a cooled solution of 0.05 g. Na in 5 cc. absolute EtOH, the
mixture warmed slightly, the solution let stand overnight at room temperature, and
the yellow deposit filtered off, washed with a little EtOH, and recrystd. from EtOH gave about 0.42 g. 2-styrylkhellin (V), deep yellow needles, m. 196°, easily soluble in warm C6H6, dissolved in concentrated H2SO4 with a red-brown color. Visnagin and BzH gave similarly about 80% 2-styrylvisnagin (VI), almost colorless crystals, m. 176° (brownish melt), dissolved in concentrated H2SO4 with an orange color. VI (1.0 g.) gave
with maleic anhydride during 10 min. in 20 cc. xylene 0.4 g. 5a,6,7,8-tetrahydro-4-methoxy-5-oxo-5H-furo(3,2-b)xanthene-6,7-dicarboxylic anhydride (VII), m. 256° (decomposition) (from Me2CO). V (1.0 g.) gave similarly in 25 cc. xylene 0.3 g. 11-MeO derivative of VII, m.
256° (decomposition) (from dioxane). IV (0.35 g.) refluxed with NaOH in MeOH, the solid product filtered off and decomposed with HCl, and the precipitate
recrystd. from absolute MeOH gave about 0.21 g. 3,9-dihydro-9-oxo-3-phenyl-1,2-xanthenedicarboxylic acid monohydrate (VII), m. about 258° (decomposition), soluble in aqueous NaHCO3. VII treated
with absolute MeOH and dry HCl gave the di-Me ester, colorless crystals, m.
66-8°. VII (0.25 g.) refluxed with Ac2O gave IV.
2-Styryl-3-methylchromone (0.35 g.) and 2 g. maleic anhydride in 20 cc. EtOPh refluxed 24 h. gave only 0.24 g. recovered starting material.
IT 1089699-71-7P
RL: SPN (Synthetic preparation); PRP (Properties); PREP (Preparation)
(Diels-Alder reaction. II. Experiments with 2-styrylchromones. On the nature of the dimer of 1,3-diphenylisobenzofuran)
RN 1089699-71-7 CAPLUS

L16 ANSWER 237 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)

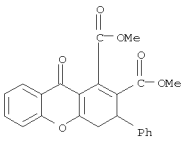


RN 859780-25-9 CAPLUS
CN 1H-Xanthene-1,2-dicarboxylic acid, 2,3,9,9a-tetrahydro-9-oxo-3-phenyl-
(CA INDEX NAME)

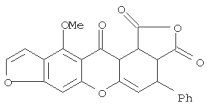


OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD
(4 CITINGS)

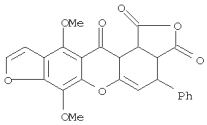
L16 ANSWER 237 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)
CN 3H-Xanthene-1,2-dicarboxylic acid, 4,9-dihydro-9-oxo-3-phenyl-, 1,2-dimethyl ester (CA INDEX NAME)



IT 858249-88-4P, 5H-Furo[3,2-b]xanthene-6,7-dicarboxylic anhydride, 5a,6,7,8-tetrahydro-4-methoxy-5-oxo-8-phenyl- 858249-90-8P, 5H-Furo[3,2-b]xanthene-6,7-dicarboxylic anhydride, 5a,6,7,8-tetrahydro-4,11-dimethoxy-5-oxo-8-phenyl- 859780-23-7P, 1,2-Xanthenedicarboxylic acid, 1,2,3,9a-tetrahydro-9-oxo-3-phenyl-, dimethyl ester 859780-25-9P, 1,2-Xanthenedicarboxylic acid, 1,2,3,9a-tetrahydro-9-oxo-3-phenyl-
RL: PREP (Preparation)
(preparation of)
RN 858249-88-4 CAPLUS
CN 3H-Difuro[3,4-a:2',3'-i]xanthene-1,3,12-trione, 3a,4,12a,12b-tetrahydro-11-methoxy-4-phenyl- (CA INDEX NAME)



RN 858249-90-8 CAPLUS
CN 3H-Difuro[3,4-a:2',3'-i]xanthene-1,3,12-trione, 3a,4,12a,12b-tetrahydro-7,11-dimethoxy-4-phenyl- (CA INDEX NAME)



RN 859780-23-7 CAPLUS
CN 1H-Xanthene-1,2-dicarboxylic acid, 2,3,9,9a-tetrahydro-9-oxo-3-phenyl-, 1,2-dimethyl ester (CA INDEX NAME)

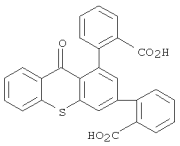
L16 ANSWER 238 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1933:618 CAPLUS
DOCUMENT NUMBER: 27:618
ORIGINAL REFERENCE NO.: 27:89h-i,90a-f
TITLE: Thiophenols. Thiochromanone and thioxanthone
AUTHOR(S): Bellavita, V.
SOURCE: Gazzetta Chimica Italiana (1932), 62, 655-63
CODEN: GCITA9; ISSN: 0016-5603
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
GI For diagram(s), see printed CA Issue.
AB Thiophenols were used as a starting point for the preparation of compds. containing
3 sulfurated nuclei, and the present work describes the preparation of thiochromanone (I) and thioxanthone derivs. of trithiophloroglucinol (II) (the only known trithiophenol). Only a very small yield of II is obtained
by the method of Pollak and Carniol (C. A. 3, 2955), whereas the yield is 60-70% if C6H3(SO2Cl)3 (5 g.) in EtOH (20 cc.) and powdered Sn (15 g.) are
heated 0.5 hr. at 50°, concentrated HCl (50 cc.) is added (keeping the temperature at 30°), the solution is refluxed 0.5 hr., steam-distilled and the
amorphous residue is crystallized from EtOH. Attempts were made to obtain the
asym. trithiophenol from o-C6H4(SO3H)2 to 3,4-(HO3S)2C6H3NH2, thence by diazotization to 3,4-(HO3S)2C6H3SO2H, and thence (with KMnO4) to 1,3,4-C6H3(SO3H)3. The latter is probably formed in alkaline medium, but to
identify it, it has to be transformed into a sulfonyl chloride, amide or other derivative, and by the action of PCl5 there is a simultaneous migration
of the sulfurated groups into sym. position, so that the only product is sym-C6H3(SO2Cl)3. The aqueous Na salt of II and ClCH2CH2CO2H, heated (until a
little acidified with HCl gives no mercaptan odor), filtered, acidified with H2SO4 or HCl, and the precipitate recrystd. from boiling water, yield
trithiophloroglucinolpropionic acid, 1,3,5-C6H3(SCH2CH2CO2H)3 (III), m. 171-2°. III in concentrated H2SO4, heated 0.5 hr. at 50-60° (SO2 is evolved and the solution turns dark orange-red), poured into ice-water,
the precipitate (a mixture of products) washed with water and dilute Na2CO3, and
recrystd. from boiling AcOH or EtOH, yields I, orange-yellow, does not fuse up to 320°. The alkaline wash liquor from the preparation of I contains a mixture of 2 intermediate less dehydrated products, which can be
separated by acidifying with H2SO4, washing the precipitate with cold water, boiling
the residue in water (1 product is much more soluble than the other), filtering hot, and cooling the filtrate, which yields, after further purification of the precipitate with boiling water, monothiochromanone-3,5-dithiopropionic acid (IV), light yellow, m. 216°. The residue insol. in boiling water, purified from EtOH, yields dithiochromanone-5-thiopropionic acid (V), golden yellow, m. 224-5°. II (5 g.) in aqueous NaOH (13 g.) and diazotized anthranilic acid (from 12 g.), heated until no more N is evolved (the solution turns orange-red), filtered, dilute H2SO4 added, the precipitate washed with hot AcOH,

L16 ANSWER 238 OF 238 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)
dissolved in aq. Na2CO3, repptd. with H2SO4 and recrystd. from EtOH or AcOH, yield benzene-1,2,3-trithio-o-benzoic acid, 1,3,5-C6H3(SC6H4CO2H-o)3 (VI), flesh-red, m. 300°. VI and concd. H2SO4, heated 6-7 hrs. on a water bath (the soln. turns an intense orange-red), poured into ice water, the ppt. washed with water, aq. Na2CO3, and water (its insoly. precludes its crystn. from any solvent), yield trithioxanthone (VII), amorphous, orange-red, remains unaltered up to 320°. The alk. wash liquor from the prepn. of VII acidified with H2SO4, the ppt. washed with water, and crystd. from AcOH by concn., yields monothioxanthone-3,5-dithio-o-benzoic acid (VIII), orange-yellow, turns slightly brown around 300°, but does not change further up to 320°.

IT 858848-56-3P, Thioxanthone, 1,3-bis(o-carboxyphenyl)-
RL: PREP (Preparation)
(preparation of)

RN 858848-56-3 CAPLUS

CN Benzoic acid, 2-[1-(2-carboxyphenyl)-9-oxo-9H-thioxanthen-3-yl]- (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
(1 CITINGS)

```
=> FIL STNGUIDE
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                      ENTRY    SESSION
FULL ESTIMATED COST                                    58.99     676.73

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                      ENTRY    SESSION
CA SUBSCRIBER PRICE                                    -7.38      -9.02

FILE 'STNGUIDE' ENTERED AT 10:00:57 ON 03 NOV 2009
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT
COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Oct 30, 2009 (20091030/UP).

=> log y
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                      ENTRY    SESSION
FULL ESTIMATED COST                                     0.49     677.22

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                      ENTRY    SESSION
CA SUBSCRIBER PRICE                                     0.00      -9.02

STN INTERNATIONAL LOGOFF AT 10:04:56 ON 03 NOV 2009
```